

133 22. (Amended) The apparatus of claim 18, wherein the data processing device decides a plurality of subsets based on the configuration of the substrate and the arrangement pattern of conductive terminals thereon, each subset comprising a plurality of conductive terminals closely located to each other.

134 26. (Amended) The apparatus of claim 25, wherein the flux needle has a needle opening having a diameter range between about 5 microns and about 60 microns.

**IN THE DRAWINGS:**

Please amend the drawings as indicated in the attached Request for Approval of Drawing Amendment. /

**REMARKS**

At the time of the Office Action dated June 7, 2002, claims 1-30 were pending in this application. Of those claims, claims 18-30 have been rejected and claims 1-17 have been withdrawn from consideration pursuant to the provisions of 37 C.F.R. § 1.142(b). Claims 18, 22, and 26 have been amended and claims 19-21 have been cancelled. Care has been exercised to avoid the introduction of new matter. Specifically, claim 18 has been amended by incorporating many of the limitations recited in claims 19-21 therein, and consequently claims 19-21 have been cancelled. Claim 22 has been amended to address a dependency issue arising from the cancellation of claim 21. Claim 26 has been amended to address an informality issue. Applicants submit that the present Amendment does not generate any new matter issue.

On page two of the Office Action, the Examiner objected to the drawings pursuant to 37 C.F.R. § 1.84(p)(4), asserting that reference numeral "26" has been used to designate both a substrate and a main air pressure supply. In response, it is proposed to amend Fig. 2B, as indicated in red on the attached photocopy. The specification has also been amended accordingly to address the related informality that the Examiner discussed on page three of the Office Action. Accompanying this Amendment is a Request for Approval of Drawing Amendment and proposed drawing corrections for Fig. 2B with the changes indicated in red ink. Applicants, therefore, respectfully submit that the imposed objection to the drawings has been overcome and, hence, solicit withdrawal thereof.

On page three of the Office Action, the Examiner objected to claims 18 and 26. Applicants note that both claims 18 and 26 have been amended to address the issues raised by the Examiner. In so doing, Applicants respectfully submit that the Examiner's objections to claims 18 and 26 have been overcome and solicit withdrawal thereof.

**Claims 18-24 and 27-30 are rejected under 35 U.S.C. § 102(b) for lack of novelty as evidenced by Stoops, U.S. Patent No. 5,615,828**

On pages four and five of the Office Action, the Examiner asserted that Stoops discloses an apparatus for dispensing flux corresponding to that claimed. This rejection is respectfully traversed.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention, such that one having

ordinary skill in the art would have recognized that the identically claimed invention is within the public domain. **ATD Corporation v. Lydall, Inc.**, 159 F.3d 534, 48 USPQ2d 1321 (Fed. Cir. 1998); **Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.**, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994). Furthermore, the Examiner must also establish that the applied reference identically discloses each feature of the claimed invention. **In re Rijckaert**, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); **Lindermann Maschinenfabrik GMBH v. American Hoist & Derrick Co.**, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). As part of this analysis, the Examiner must (a) identify the elements of the claims, (b) determine the meaning of the elements in light of the specification and prosecution history, and (c) identify corresponding elements disclosed in the allegedly anticipating reference. **Lindermann Maschinenfabrik GMBH v. American Hoist & Derrick Co.**, supra.

Independent claim 18 has been amended to include a data processing device adapted for determining an optimum valve pressure, flux viscosity, and flux spray pattern based on a configuration of the substrate and an arrangement pattern of conductive terminals on the substrate. Claim 18 has also been amended to recite that the data processing device controls movement of a flux dispense nozzle in at least two dimensions relative to the substrate. None of these features, however, are taught by Stoops. It is not apparent wherein Stoops discloses a data processing device that uses data, such as the configuration of the substrate and the arrangement pattern of conductive terminals on the substrate, to determine parameters such as valve pressure, flux viscosity and flux spray pattern. Furthermore, the substrates of Stoops only move in one dimension relative to the nozzle.

The above argued differences between the apparatus defined in independent claim 18 and the device of Stoops undermine the factual determination that Stoops identically describes the claimed invention within the meaning of 35 U.S.C. § 102. **Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.**, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); **Kloster Speedsteel AB v. Crucible Inc.**, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). Applicants, therefore, respectfully submit that the imposed rejection of claims 18, 22-24 and 27-30 under 35 U.S.C. § 102 for lack of novelty as evidenced by Stoops is not factually viable and, hence, solicit withdrawal thereof.

**Claims 18-23 and 27-30 are rejected under 35 U.S.C. § 102(b) for lack of novelty as evidenced by Napor et al., U.S. Patent No. 3,741,150 (hereinafter Napor)**

On pages five and six of the Office Action, the Examiner asserted that Napor discloses an apparatus for dispensing flux corresponding to that claimed. This rejection is respectfully traversed.

Claim 18 recites a data processing device adapted for determining an optimum valve pressure, flux viscosity, and flux spray pattern based on a configuration of the substrate and an arrangement pattern of conductive terminals on the substrate. Claim 18 also recites that the data processing device controls movement of a flux dispense nozzle in at least two dimensions relative to the substrate. None of these features, however, are taught by Napor. It is not apparent wherein Napor discloses a data processing device that uses data, such as the configuration of the substrate and the arrangement pattern of conductive terminals on the substrate, to determine parameters such as valve pressure, flux viscosity and flux spray pattern. Furthermore, the

substrates of Napor do not move in two dimensions relative to the nozzle. Applicants, therefore, respectfully submit that the imposed rejection of claims 18, 22-23 and 27-30 under 35 U.S.C. § 102 for lack of novelty as evidenced by Napor is not factually viable and, hence, solicit withdrawal thereof.

**Claims 25 and 26 are rejected under 35 U.S.C. § 103 for obviousness predicated upon**

**Stoops in view of Napor**

On pages five and six of the Office Action, the Examiner concluded that one having ordinary skill in the art would have been motivated to modify the apparatus of Stoops in view of Napor to arrive at the claimed invention. This rejection is respectfully traversed.

Claims 25 and 26 depend ultimately from independent claim 18, and Applicants incorporate herein the arguments previously advanced in traversing the imposed rejection of claim 18 under 35 U.S.C. § 102 for lack of novelty as evidenced by Stoops. Specifically, Stoops neither discloses nor suggests an apparatus comprising a data processing device adapted for determining an optimum valve pressure, flux viscosity, and flux spray pattern based on a configuration of the substrate and an arrangement pattern of conductive terminals on the substrate. Moreover, Stoops neither discloses nor suggests that the data processing device controls movement of a flux dispense nozzle in at least two dimensions relative to the substrate. The secondary reference to Napor does not cure the argued deficiencies of Stoops. Accordingly, the proposed combination of references would not yield the claimed invention. Applicants, therefore, respectfully submit that the imposed rejection of claims 25 and 26 under 35 U.S.C. § 103 for obviousness predicated upon Stoops in view of Napor is not viable and, hence, solicits withdrawal thereof.

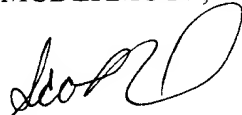
Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Applicants have made every effort to present claims which distinguish over the prior art, and it is believed that all claims are in condition for allowance. However, Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. Accordingly, and in view of the foregoing remarks, Applicants hereby respectfully request reconsideration and prompt allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417, and please credit any excess fees to such deposit account.

Respectfully submitted,

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